

Closure Cost Estimate for the Existing ISOCI Facility

Field Activities	Total		Tank 21	Tank 22	Tank 23	Tank 24	Tank 25	Tank 26	Tank 27	Tank 100	Tank 200	Tank 300	Tank 400	Tank 500	Tank 600	Tank 700	Tank 40	Tank 41	Tank 42	Tank 43	Tank 50	Tank 4&5	Tank 47	Total			Total
	Volume	Unit	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty	Qty		Unit	Unit Cost	
Tank System Purging																											
Cost of Dry Ice			422	467.1	467.1	422	422	422	422	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	1066.4	305.4	305.4	292.9	292.9	93.1	64.4	93.1	11956.2	lbs	2.13	\$25,467
Labor Cost			7	7.5	7.5	7	7	7	7	17.5	17.5	17.5	17.5	17.5	17.5	17.5	5	5	5	5	1.5	1.5	1.5	197	hrs	67.03	\$13,205
Pipe Flushing (Labor & Equipment)			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	hrs	129.56	\$2,721
Decontamination (Labor & Equipment)																											
Tanks	33372	ft²	58	61.5	61.5	58	58	58	58	96.5	96.5	96.5	96.5	96.5	96.5	96.5	45.5	45.5	45.5	45.5	24.5	20	24.5	1339.5	hrs	75.49	\$101,119
Heavy Equipment																											\$2,865
2nd Containment	23501	ft²																						940	hrs	75.49	\$70,961
Transportation¹																											
Liquids (Oil, Oilywater, Glycol)	716088	gal																						144	truck Load	300	\$43,200
Sludge²	397.6	tons																						80		1200	\$96,000
Loading Equipment Rental																								38	day	500	\$19,000
Truck Washout																								224	Trucks	213	\$47,712
Treatment and Disposal																											
Oil	629673	gal	105.4	117.2	117.2	105.4	105.4	105.4	105.4	267.2	267.2	267.2	267.2	267.2	267.2	267.2								2631.8	tons	12	\$31,582
Oilywater	77081	gal															75.9	75.9	73.3	73.3	23.6			322	tons	107.9	\$34,744
Glycol	9334	gal																				16	23.6	39.6	tons	83.92	\$3,323
Sludge	397.6	tons	14.2	15.2	15.2	14.2	14.2	14.2	14.2	35.4	35.4	35.4	35.4	35.4	35.4	35.4	10.1	10.1	10.1	10.1	3	2	3	397.6	tons	150	\$59,640
Rinseate (Tanks)³	33372	ft²	5966	6326	6326	5966	5966	5966	5966	9846	9846	9846	9846	9846	9846	9846	4918	4718	4718	4718	2610	2158	2610	137854	gal	1.31	\$180,589
Rinseate (2nd Containment)³	23501	ft²																						94000	gal	1.31	\$123,140
Field Activities Subtotal																											\$855,266
Sampling & Analysis⁴																											
Waste Characterization - Oil	14	Samples																						14	Samples	488	\$6,832
Waste Characterization - Oilywater	5	Samples																						5	Samples	488	\$2,440
Waste Characterization - Glycol	3	Samples																						3	Samples	410	\$1,230
Waste Characterization - Sludge	22	Samples																						22	samples	270	\$5,940
Waste Characterization Labor & Equ	11	hrs																						11	hrs	98.21	\$1,080
Wipe Samples	118	Samples																									
Labor & Equipment			2.5	2.5	2.5	2.5	2.5	2.5	2.5	4	4	4	4	4	4	4	2	2	2	2	1.5	3	1.5	59.5	hrs	98.21	\$5,843
Analysis			2040	2040	2040	2040	2040	2040	2040	3264	3264	3264	3264	3264	3264	3264	1632	1632	1632	1632	1224	2448	1224	48552	\$		\$48,552
Rinseate	42	Samples																									
Labor & Equipment			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	21	hrs	103.37	\$2,171
Analysis			1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	1496	31416	\$		\$31,416
Concrete Samples	38	Samples																									
Labor & Equipment	26.5	hrs																						26.5	hrs	54.3	\$1,439
Analysis	25004	\$																						25004	\$		\$25,004
Soil Matrix	122	Samples																									
Labor & Equipment	104.5	hrs																						104.5	hrs	76.5	\$7,994
Analysis	80276	\$																						80276			\$80,276
Soil Gas	59	Samples																									
Labor & Equipment	59	hrs																						59	hrs	87.29	\$5,150
Analysis	24662	\$																						24662			\$24,662
Sampling & Analysis Subtotal																											\$250,030
Subtotal																											\$1,105,296
Engineering (10%)																											\$110,530
SUBTOTAL																											\$1,215,826
Contingency (20%)																											\$243,165
TOTAL																											\$1,458,991

Notes:

1 - Tranportation costs for liquids include loading and unloading costs and transportation of Used Oil, Oilywater and Used Glycol/Antifreeze to DeMenno/Kerdoon. It does not include equipment rental for loading and truck washout.

2 - Tranportation costs for sludge include loading and unloading costs and transportation to Kettleman Facility. It does not include equipment rental for loading and truck washout.

3 - Rinseate water cost includes tranportation and disposal costs.

4 - All estimates of sampling costs include costs for collection and handling of samples, sampling equipment, shipment of samples, decontamination of the sampling crew, and rental of necessary vehicles.

Assumtions

Transportation: It is assumed that it will take 1hr to load and 1 hr to unload liquid (oil, oily water, and used glycol/antifreeze) waste and 1 hr round trip to DeMenno/Kerdoon facility in Compton. Each truck trip is assumed to carry 5,000 gallons of liquid waste.

Transportation: It is assumed that it will take 2 hrs to load and 2 hrs to unload the sludge waste and 12 hrs round trip to Kettleamn Hills facility. Each truck trip is assumed to be carrying 5 tons of sludge.

Transportation: It is assumed that in an eight hour work day the loading equipment for liquid waste will be able to load 8 trucks and for sludge waste 4 trucks.

Treatment & Disposal: It is assumed that 90% of the waste in the tanks will be liquid and 10% will be sludge.

Sampling & Analysis: Sampling & Analysis included for waste characterization for each tank, decontamination confirmation rinseate water for each tank pipe line (two pipe lines per tank) and for tank decon water, concrete of secondary containment including loading and unloading areas, soil matrix, soil gas, and tank wipe samples.